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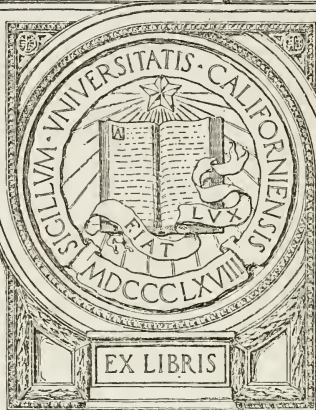
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INDUSTRIAL HOUSING

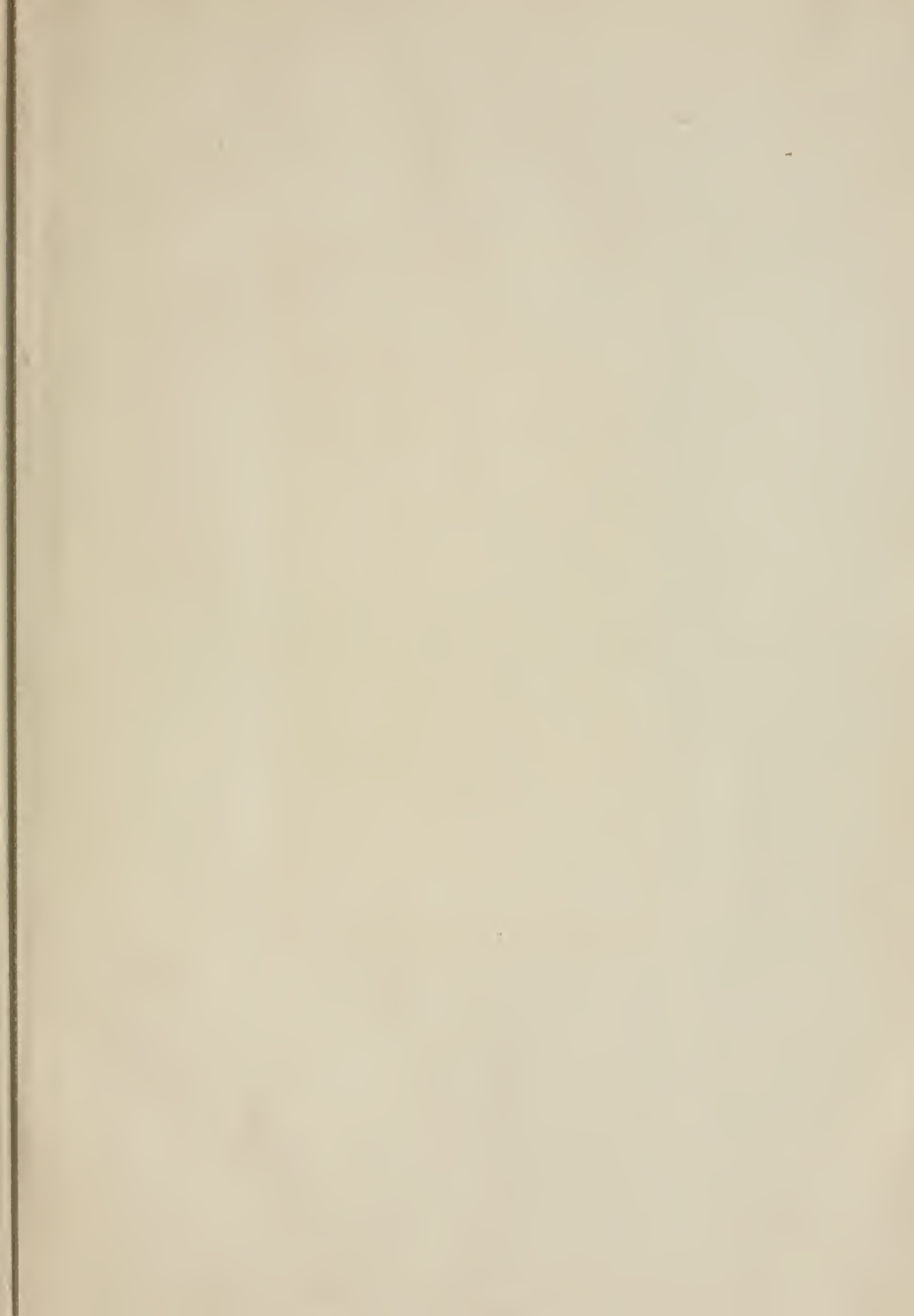
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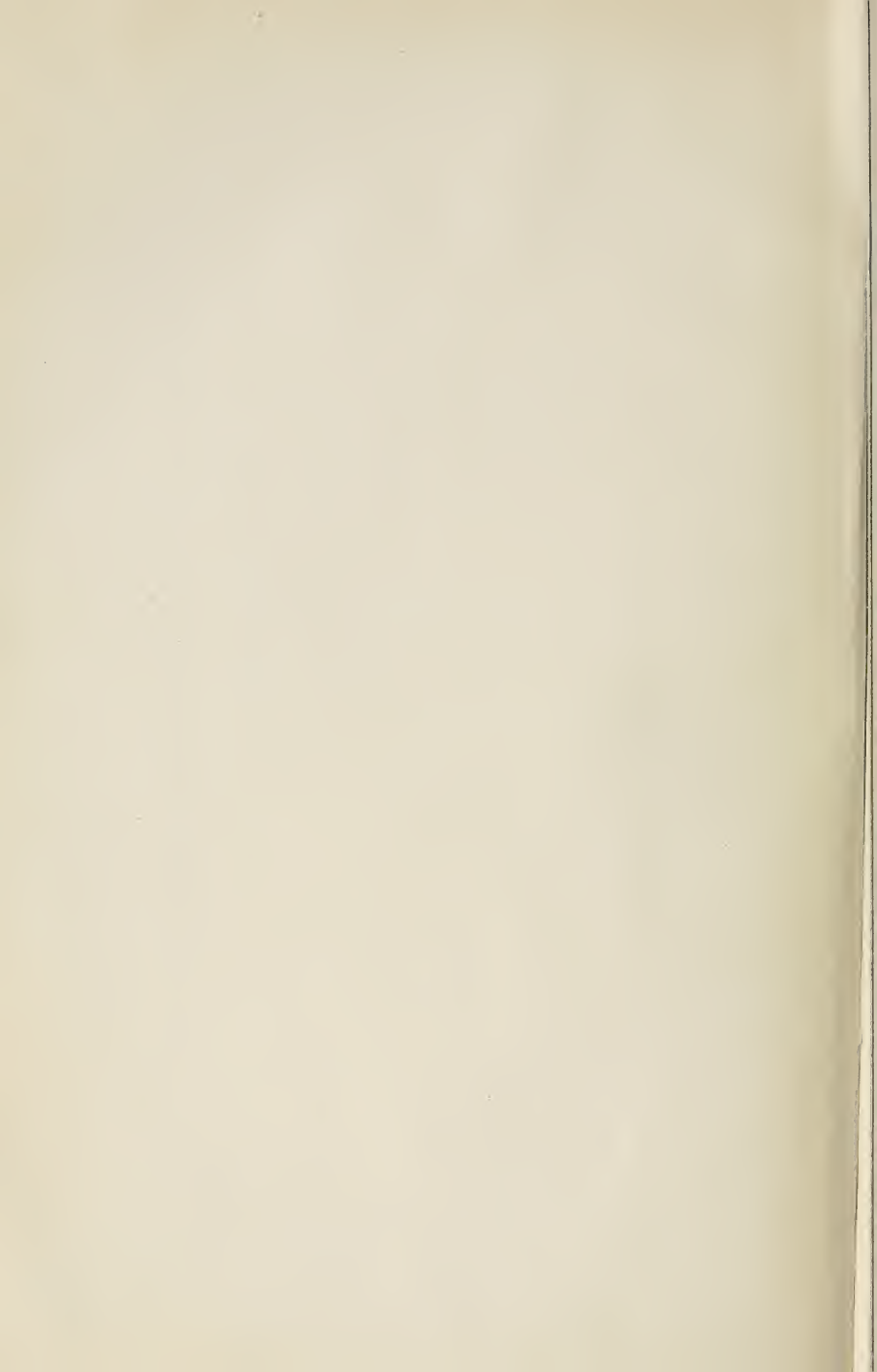
CLINTON MACKENZIE

GIFT OF



EX LIBRIS





INDUSTRIAL HOUSING

BY

CLINTON MACKENZIE

Pr

15 BROAD STREET, NEW YORK



The Knickerbocker Press
NEW YORK

1920

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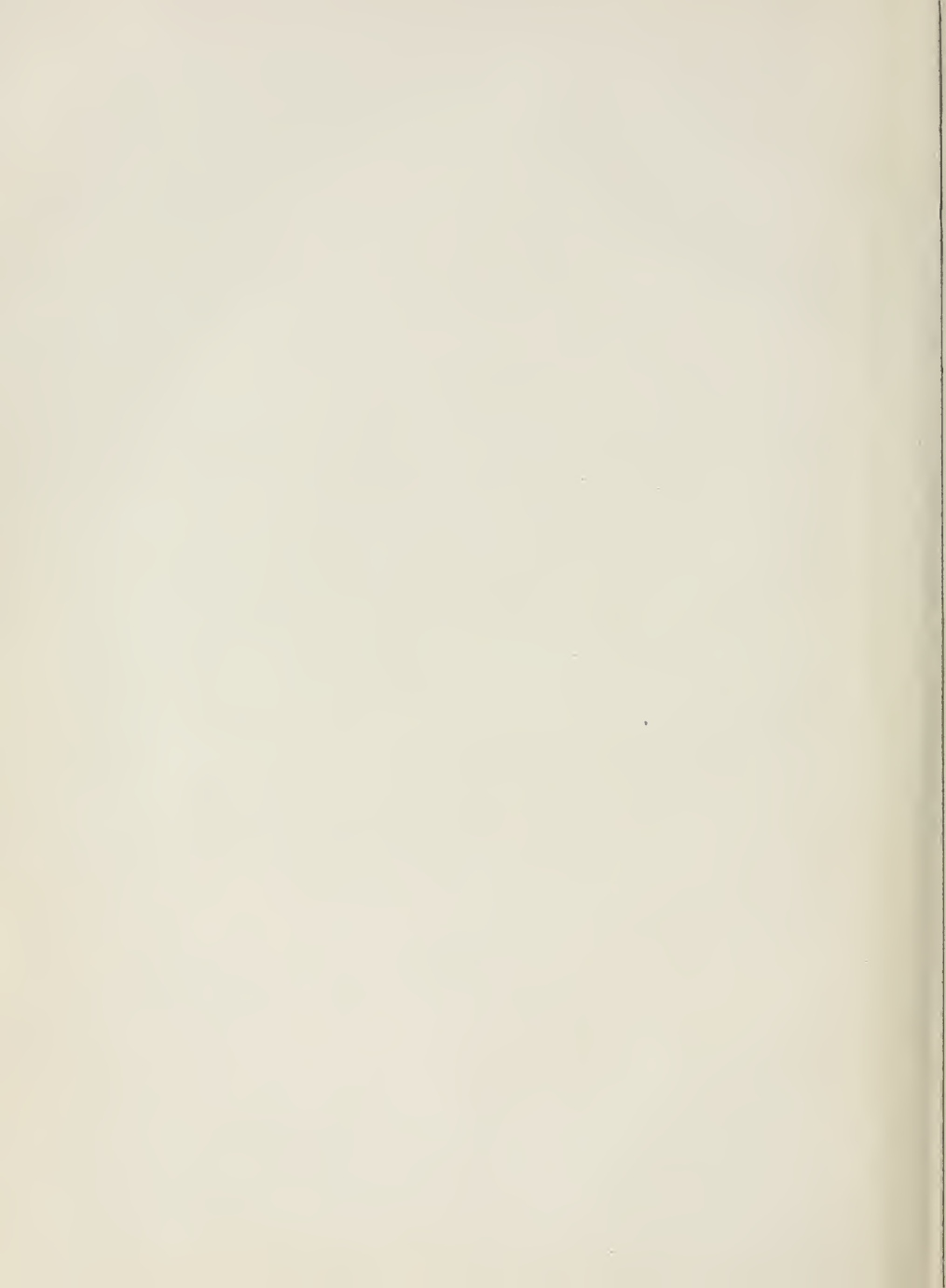
FOREWORD

After many years of practical experience in all phases of industrial housing, I feel that those intending to engage in such an enterprise will be interested in a brief survey of the underlying principles which must be grasped in order to arrive at satisfactory results.

As Tenement House Commissioner for the State of New Jersey, as a director of the National Housing Association, and in consultation on Town Planning I have been deeply impressed with the importance of a thorough preliminary study of each problem before discussing house plans.

CLINTON MACKENZIE,
Architect.

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INDUSTRIAL HOUSING

As each housing development presents a different series, or combination of conditions, no standards can be adopted until a thorough preliminary study of all local conditions has determined the facts. However, a standard method of approaching the question can be established to advantage in accordance with the following principles.

First, the problem should not be considered as a philanthropic attempt at uplift, but as a business complication that must be solved and solved so as to be of mutual advantage to both parties.

Second, the plan must be on a sound economic basis yielding a direct return on the money invested quite outside of the indirect return that may accrue from a satisfactory labor market. Also, the investment must be kept low enough to permit this return without straining the financial resources of the tenant.

Third, the location of the housing, its relationship to reasonable facilities for education and recreation and the house itself must please the tenant. After all, he should be the judge and not the owner or architect.

I am heartily in favor of welfare work, but it will not carry on steadily to meet the demand. The problem is an economic one and must be faced as such.

The following article reprinted from the New York *Evening Post* of August 21, 1920, carries out this thought:—

NEW FACTOR ENTERS INTO PLANNING AND EXECUTION OF HOMES FOR INDUSTRIAL WORKERS

Creation of Towns and Cities No Longer being Considered from the Standpoint of Welfare Work, Philanthropy, or Speculation, but as a Fundamental Factor in Industrial Progress Demanding Care and Foresight—Erection of Houses at Cost of \$2,200 Each

By CLINTON MACKENZIE

INDUSTRIAL HOUSING EXPERT

A new thought is finding expression in industrial housing. It is no longer being considered from the standpoint of welfare work, philanthropy, or speculation, but as a fundamental factor in industrial progress, demanding the same forethought and care in planning as other departments. As a matter of fact, it is simply manufacturing an article for sale either in the form of rent or deferred payments, and, considered as such, it requires a careful expert study of the market demands and meeting these demands in such a way as to make an easy sale and a satisfied customer on the basis of a permanent investor.

Heretofore, as welfare work or philanthropy, the owner has considered it his privilege to impress on the tenants his own standard of what a house should be, while the speculative builder has provided what the market demanded, but taken quick profits and no responsibility for the permanency of the investment.

What the market demands requires just as expert study as market conditions for any other manufactured article. It means a study in each locality of how the people live and what they can afford to pay and involves all the problems of nationality, local customs, social and economic conditions.

Beyond making a sale one must make a satisfied customer over a long period of years, and the most fundamental factor to secure permanency of the investment is the question of location or site. Formerly, any good, well-drained ground was considered suitable, but the accumulated knowledge and study of town planning has forced the fact to the front that we can prevent the

tremendous waste caused by the rapidly changing character of real estate improvements. The old theory that the increase in land value justifies the waste of improvements before they have outlived their period of usefulness is exploded. If they had been located properly in the first instance the waste could have been prevented, and while there is no horoscope by which the town planner can predict the future, given equal attainments in his speciality, he should meet with the same success as men in other lines of business.

It is entirely impossible to form standards or rules for industrial housing. Conditions must be met as you find them. Methods successful in one locality will fail in another. The only rule you can establish is to make a serious study of local conditions and, using the facts so gathered, apply to them the principles of town planning. Furthermore, it must be borne in mind that one is not giving anything away. The work should be planned on the sound principle of mutual advantage.

Industrial housing covers a wide range—from day laborers' houses to the highly paid mechanic and salaried employee. It also involves all questions of civic improvements extension, of public utilities and transportation facilities, and the proper relationship of the housing to places of employment, education, and recreation.

It has always been considered impossible on an economic basis to provide housing for the day laborer, but I believe it is possible if we accept his standard of requirements. In most communities one will find him occupying old buildings totally out of repair, open to the weather, and generally unsanitary and paying a high rate for what he receives. While it is admittedly impossible to secure from him a financial return if you provide a completely finished house it is possible to build something infinitely better than his present quarters and secure a return.

The question of financial return on industrial housing may be figured either directly or as an indirect return in the form of contented labor, but I am firmly convinced that it should be figured as a direct return if good housing is to become a general rule. While the direct profit may be figured at a low interest yield, it should not be made so low as to create the impression of charity.

A very interesting experiment is being carried out in Kings-

port, Tenn., as it is the first attempt in this country to build a fully rounded out city out of whole cloth. We have numerous examples of individual industry towns, but none deliberately planned and laid out in advance to accommodate diversified industries, with provisions made for the education, recreation, and social life of a population not then in existence. The amazing success accomplished at Kingsport has opened up a new vista in industrial city planning.

Among other advanced plans is the creation of a subdivision of the town for negroes, laid out with the same forethought and high standard as shown in the other subdivisions. It is the first time that an attempt has been made to build a negro village of a high order with their own schools, churches, stores, lodges, etc., providing the same grade of housing and general development as is furnished the white population of the same economic condition.

There has recently been erected a group of some sixty-seven houses which were planned after careful study of the houses built by local workmen. Notwithstanding present high costs, by a careful study of requirements as to finish and equipment, and the use of stock materials and the elimination of unnecessary details, they were completed within an average cost of \$2,200. The houses provide from four to five rooms and bath. They met the conditions and requirements of the prospective tenants and found ready purchasers. While this is no notable architectural achievement, it illustrates the value of studying the market

The development of Kingsport is well worth investigation by those interested in this subject. The following quotation from the *Saturday Evening Post* touches on some features and has the value of a disinterested view point rather than that of one who has been connected with its development from its beginning:

The Saturday Evening Post

October 25, 1919.

A NEW KIND OF TOWN

What the others have tried and proved worthy a new Southern town is aiming to adopt. But this isn't all, for that would be

only standing still, and the fathers of the new town are bent on doing a little pioneering in the hope that the results will afford an object lesson as well as an inspiration to other industrial leaders. The fact of the matter is, this brand new town, which in four years has grown from practically nothing to a city of 10,000 humans, is actually a laboratory experiment for the people of America. Can an industrial community made up of a factory population—native Americans, however—be converted into a spotless town? The promoters say yes, and they are backing up the thought in a most material fashion.

.

Bankers in New York built an expensive railroad from the Atlantic Ocean. This was done some years ago when there was still hope in the building of a railroad—of course no group or individual would be so daring to-day. The road had to have freight and lots of it, for the line had been driven through a country where the construction costs were high. There were plenty of resources—coal, timber, stone, sand, clay, limestone, silica, feldspar, kaolin, and other valuable materials, including a splendid supply of pure, cold mountain water. What was needed was industries to produce tonnage, and it was to fulfill this desire that the town was created. Let us right now, therefore, dismiss the idea that this new and modern community is anything but an out-and-out commercial venture. This makes the work being done there more interesting, for the present plans would certainly not be used if it were thought they would not prove profitable by a dollar-and-cents measure.

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The charter of the town was drafted by experts and was later submitted to the Bureau of Municipal Research of the Rockefeller Foundation for study and correction. The municipal government consists of five councilmen, elected by the citizens at intervals of four years. Unusual care is exercised by the people in choosing their councilmen, for the reason that these councilmen elect one of their number to be mayor. The mayor appoints a city manager, who need not be a resident of the city or state.

The latter employs and dismisses all other employees of the city. The mayor presides at council meetings and appoints the school board, consisting of three men and two women.

The school system is designed after the plan used in Gary, Indiana. Round the schoolhouses are four acres of playgrounds. There is a play teacher for the smaller children. The city hospital is municipally operated, with accommodations for forty patients. A civic center has been laid out, centrally located, with ample space for all public buildings. The planting of trees and shrubbery is being done under the direction of a trained landscape engineer.

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The controlling factor in the development of the town is the improvement corporation which owns the city's power plant and most of the real estate in and round the town. This corporation attends to the problem of housing the population. It builds houses and either rents or sells them at cost plus a charge of \$200 or \$300 for the lot, giving the purchaser easy terms for settlement. The improvement corporation is also responsible for the splendid golf course that has been constructed for the benefit of the town's inhabitants.

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The common-sense element is responsible for the development of an industrial scheme that is destined to eliminate all waste eventually. Coöperation is the big thought, and though the different plants have different owners the whole lot are pretty closely linked to one another.

.

But this is not all, for the town pays as much attention to humanities as it does to mechanics. A great insurance company heard of the splendid work that was being undertaken there. They got the directors of the enterprise to call all the industries together and said: "Let us insure every worker in the town. We would like to be your partners in this worthy effort, for we

share the same ideals. You say the word and we will try to make the town the healthiest spot in America."

The proposition was considered and accepted, so that now there isn't a live person in town who is listed on a company payroll but has been insured by his employer. All workmen were insured without physical examination. A health center has been established. There is a free nursing service by visiting nurses to sick employees. An elaborate campaign has been inaugurated for the prevention and cure of disease.

This is perhaps the first time in history that the total working population in any town has been first insured without any physical examination, and then has been subjected to health measures by the insurer, who proposes to keep each individual happy, healthy, and efficient. The insurance company says: "We are not out to make money out of this undertaking. But we do propose to show the nation what it is possible to accomplish in the preservation of health and life in an intelligent community when the proper steps are taken."

(Reprinted from the Saturday Evening Post, of October 25, 1919. Philadelphia. Copyrighted, 1919, by the Curtis Publishing Company, Philadelphia.)

The following illustrations show the plan of the city, some of the housing subdivisions and their architectural treatment.



CAROLINA, CLINCHFIELD & OHIO R. R. STATION

CLINTON MACKENZIE

Architect

Wm. B. Thayer



KINGSFORT INN
CLINTON MACKENZIE
Architect

Wm. H. H. H. H.
Photo. N. Y. C.





SECOND FLOOR PLAN.
Jan 9 - 1 - 1900
 KINGSFORT INN.
 KINGSFORT TENN.

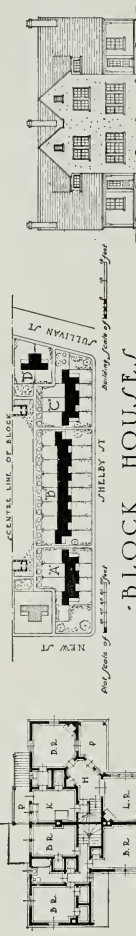
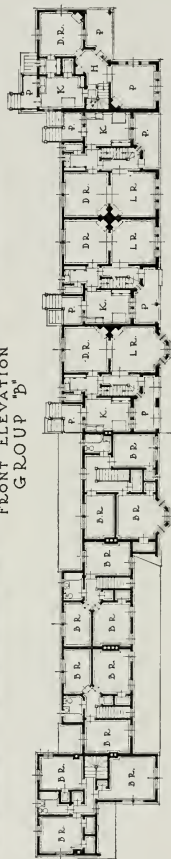
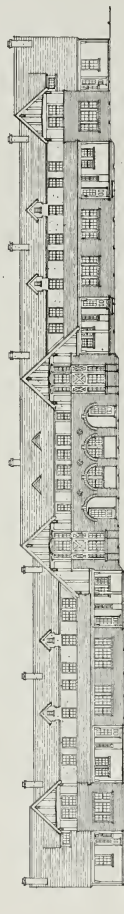
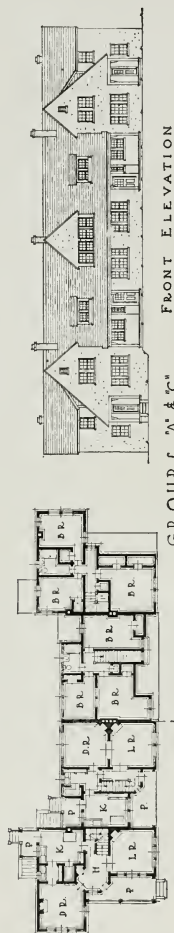
CLINTON MACKENZIE
 ARCHITECT
 15 BROAD ST. N.Y.C.



CENTRAL COURT, KINGSFORT INN
CLINTON MACKENZIE
Architect



MEN'S LOUNGE, KINGSFORT INN
CLINTON MACKENZIE
Architect



·BLOCK HOUSES
·KINGSPORT TENN.

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. NYC



*Wm. H. H. H. H. H.
Plate 14 of 2*

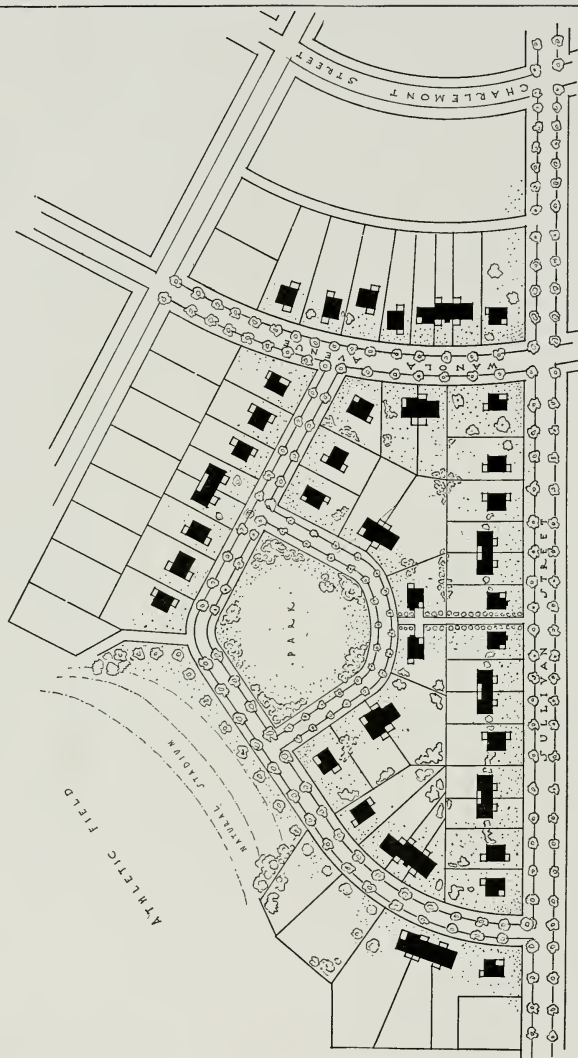
CENTRAL PORTION OF BLOCK HOUSE
SHOWN ON OPPOSITE PAGE
CLINTON MAC KENTIE
Archited



GENERAL VIEW, BLOCK HOUSES
CLINTON MACKENZIE
Architect



END VIEW, BLOCK HOUSES
CLINTON MACKENZIE
Architect



DEVELOPMENT NO. 2. KINGSPORT TENN.

JOHN KOLER
TOWN PLANNER
CAMBRIDGE MASS

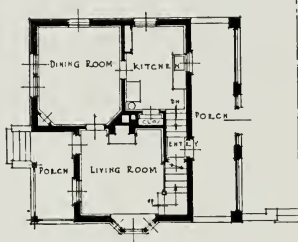
CLINTON MACKENZIE
ARCHITECT
15 BRAD ST. N.Y.C.



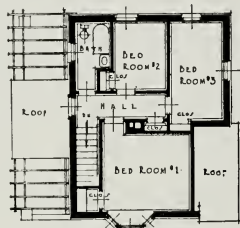
HILLTOP DEVELOPMENT NO. 2
CLINTON MACKENZIE
Architect



• E L E V A T I O N S •

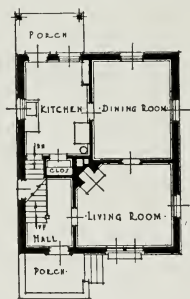


• FIRST FLOOR PLAN •



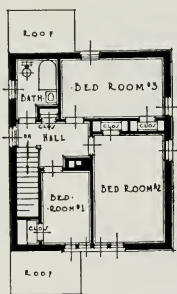
• SECOND FLOOR PLAN •

• HOUSE F •



• FIRST FLOOR PLAN •

Scale of 1" = 10 feet



• SECOND FLOOR PLAN •

• HOUSE E •

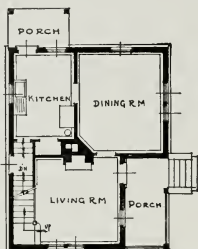
• DEVELOPMENT NO 2 •

• KINGSPORT TENN. •

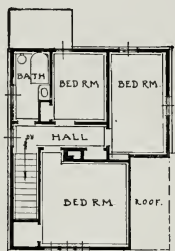
CLINTON MACKENZIE.
ARCHITECT.
15 BROAD ST. N.Y.CITY



FOOTPATH UP THE HILL
DEVELOPMENT NO. 2
CLINTON MACKENZIE
Architect

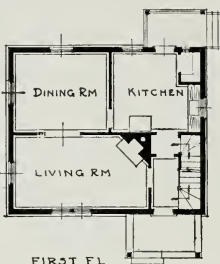


FIRST FLOOR

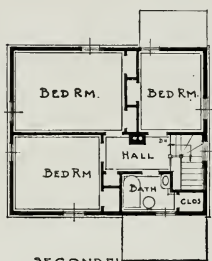


SECOND FLOOR

HOUSE G

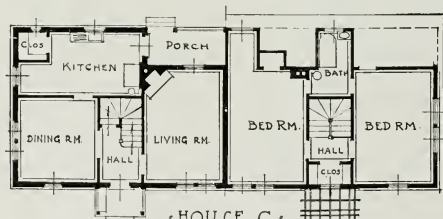


FIRST FL



SECOND FL.

HOUSE D



FIRST FL

SECOND FL

HOUSE C

DEVELOPMENT NO 2
KINGSPORT TENN

Scale of  feet

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. N.Y. CITY

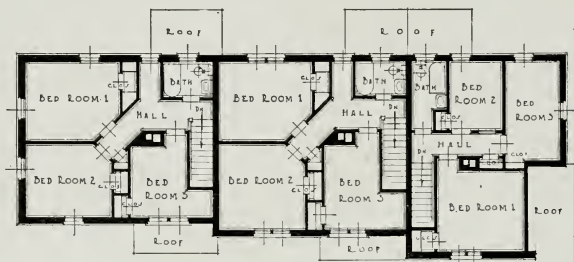


SINGLE AND SEMI-DETACHED HOUSES
 DEVELOPMENT NO. 2
 CLINTON MACKENZIE
Architect

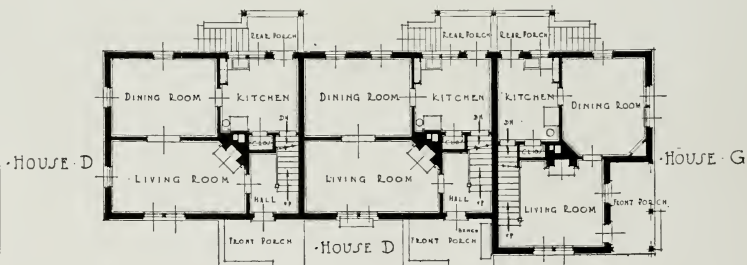
*W. Mackenzie
 photo H. V. C.*



• FRONT ELEVATION •



• SECOND FLOOR PLAN •



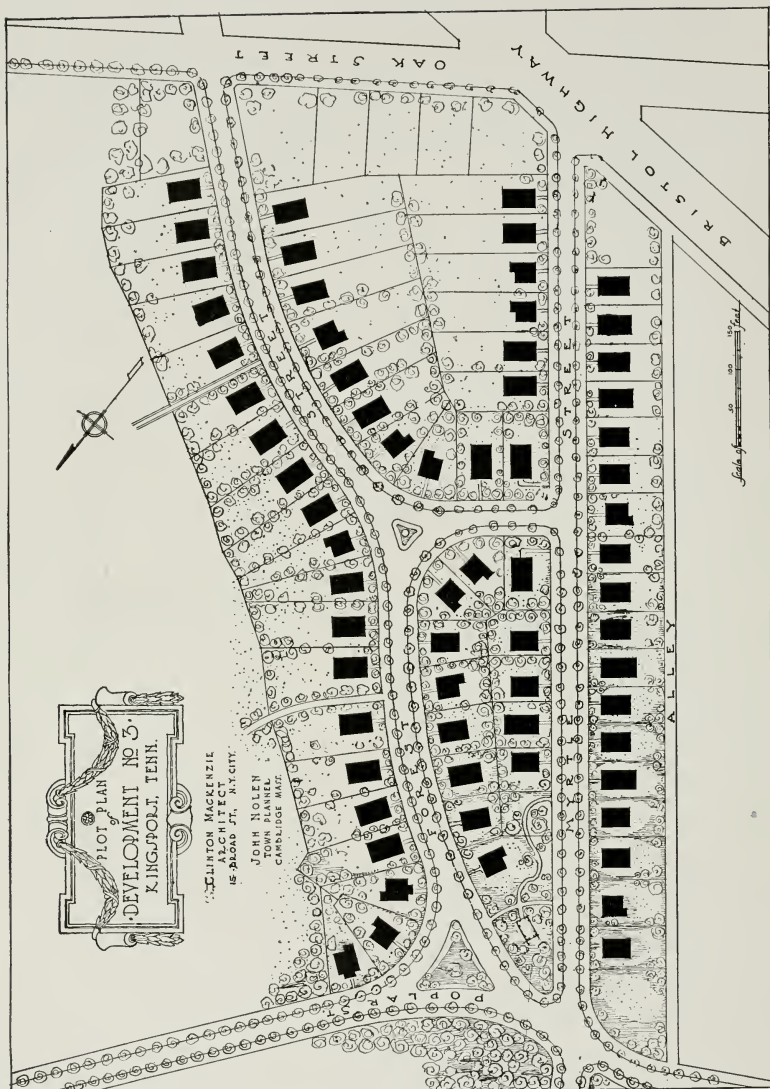
• FIRST FLOOR PLAN •
• DEVELOPMENT NO 2 •
• KINGSFORD TENN •

CLINTON MACKENZIE
J.C.B.

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST NYC

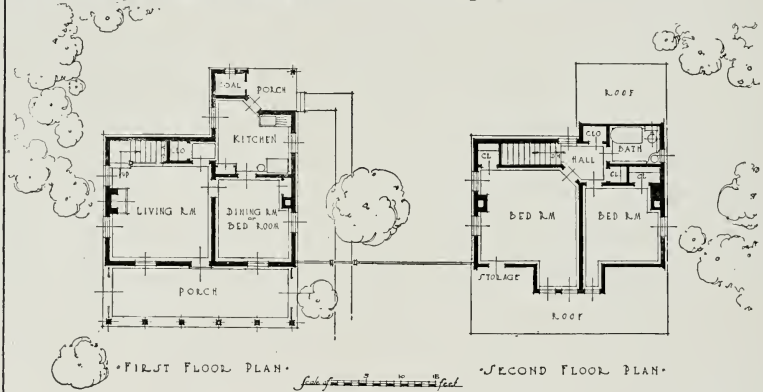
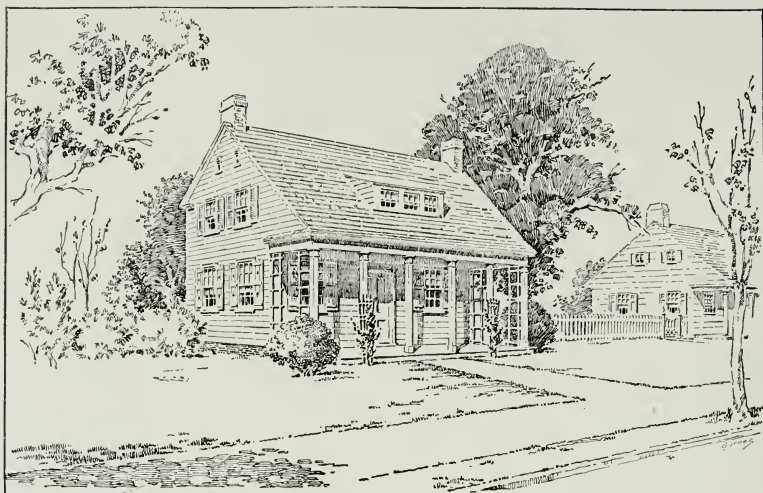


TRIPLE HOUSE. DEVELOPMENT NO. 2
SHOWN ON OPPOSITE PAGE
CLINTON MACKENZIE
Architect





MYRTLE STREET FROM THE BRISTOL HIGHWAY
CLINTON MACKENZIE
Archited

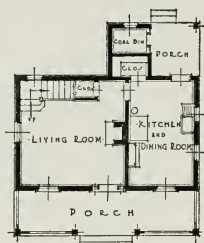


• HOUSE NO 7 •
 • DEVELOPMENT NO 3 •
 • KINGSFORT TENN •

CLINTON MACKENZIE
 ARCHITECT
 15 BROAD ST, N.Y.C.

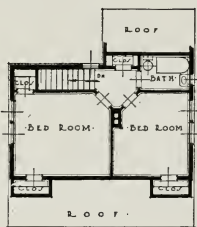


CENTER OF DEVELOPMENT NO. 3
CLINTON MACKENZIE
Architect



FIRST FLOOR PLAN

HOUSE NO 4.



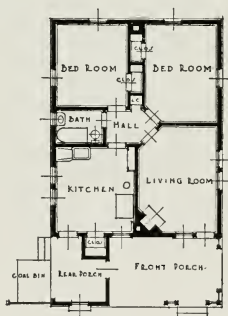
SECOND FLOOR PLAN

SCALE



ELEVATIONS

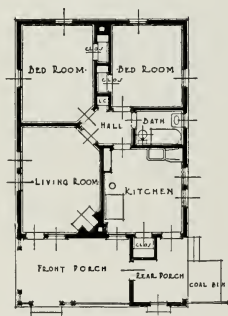
SCALE



HOUSE NO 2-R.

DEVELOPMENT
NUMBER 3.
KINGSFORD TENN.

SCALE

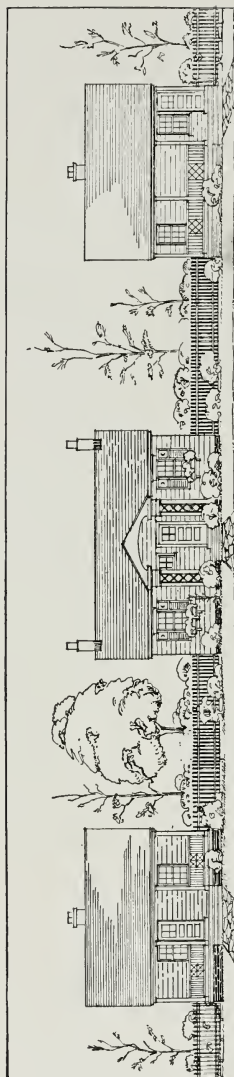


HOUSE NO 2.

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. NYC



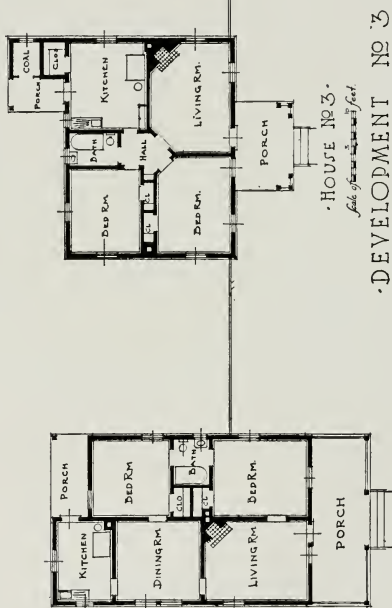
TWO STORY 4 AND 5 ROOM HOUSE
DEVELOPMENT NO. 3
CLINTON MACKENZIE
Architect



ELEVATION

ELEVATION
SCALE

ELEVATION



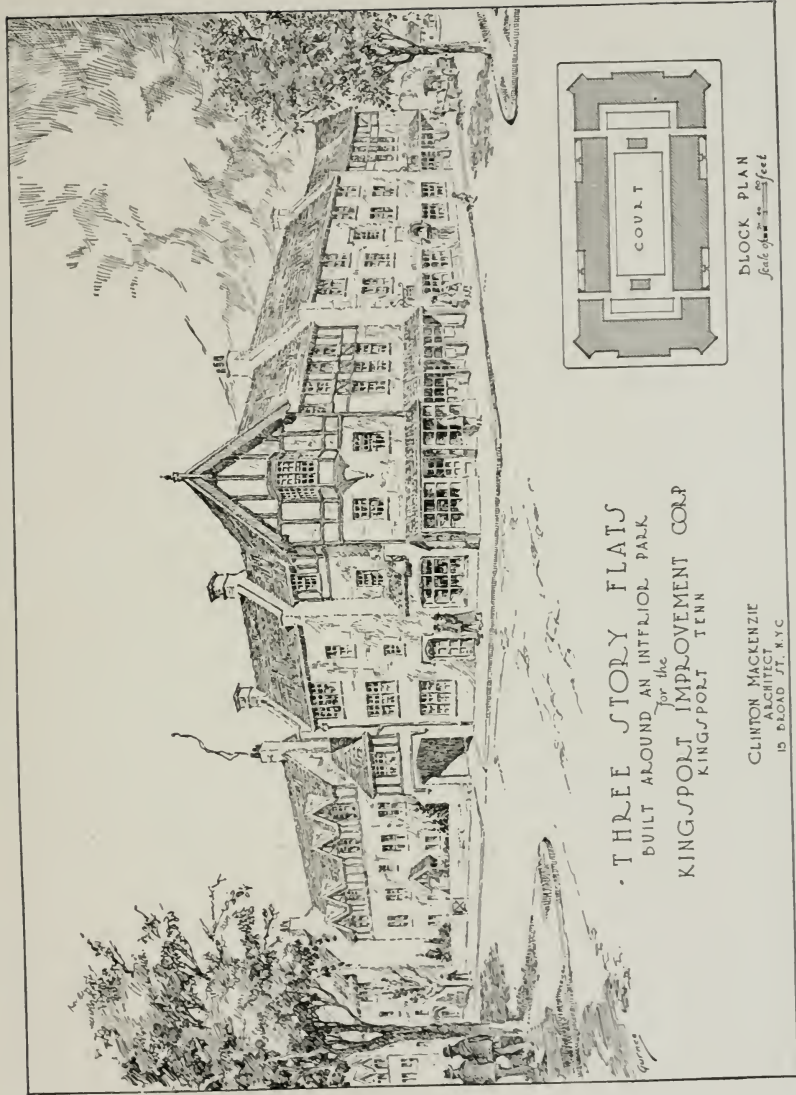
FLOOR PLAN

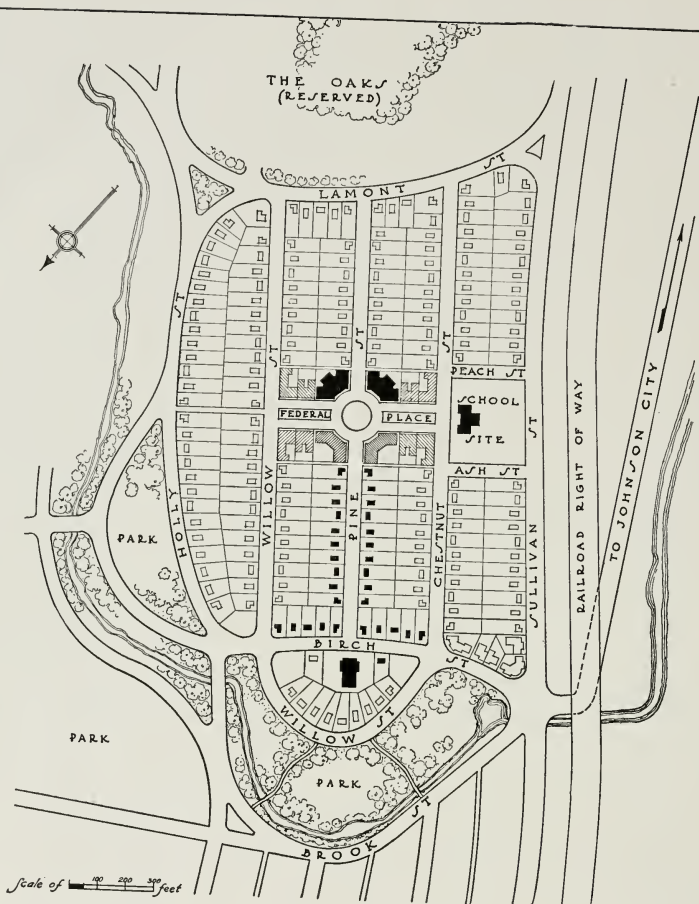
HOUSE NO. 10

FLOOR PLAN

HOUSE NO. 8

CLINTON MCKENZIE
ARCHITECT
15 BROAD ST., N.Y.C.

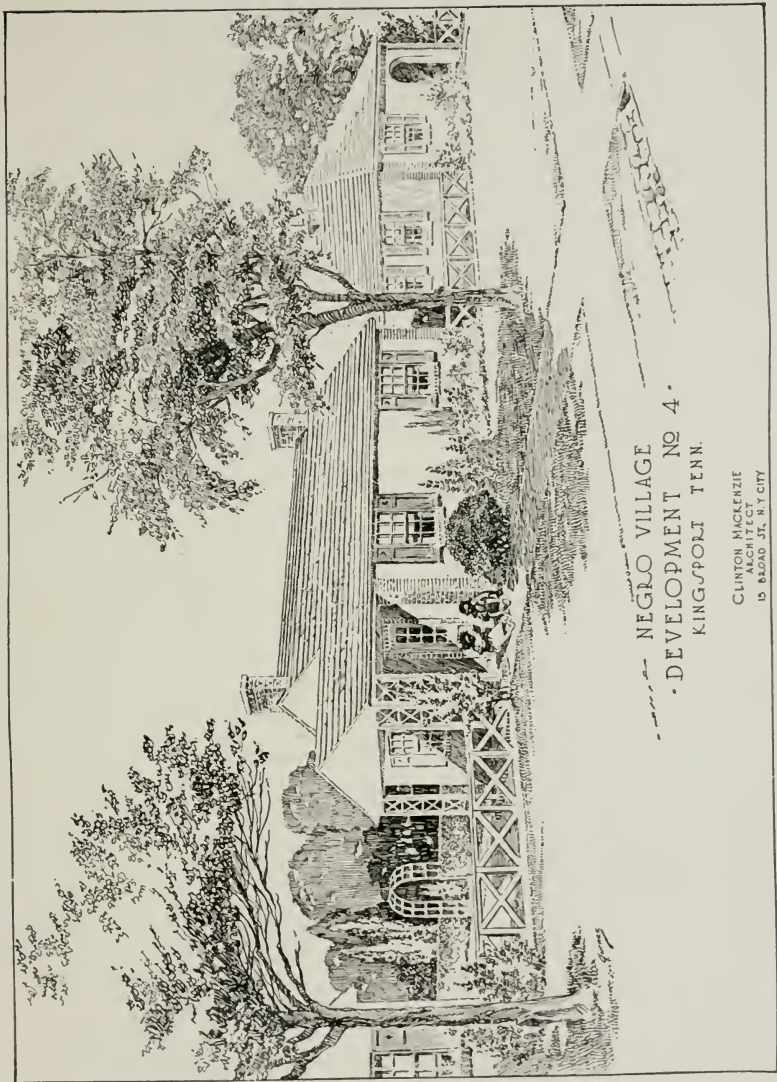




NEGRO VILLAGE
• DEVELOPMENT NO. 4 •
KINGSPORT TENN

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. N.Y.C.

JOHN NOLEN
TOWN PLANNER
CAMBRIDGE MASS.



NEGRO VILLAGE
DEVELOPMENT NO 4.
KINGSPOLI TENN.

CLINTON MACLENTZIE
CLINTON, TENN.
15 BROAD ST. N.Y. CITY

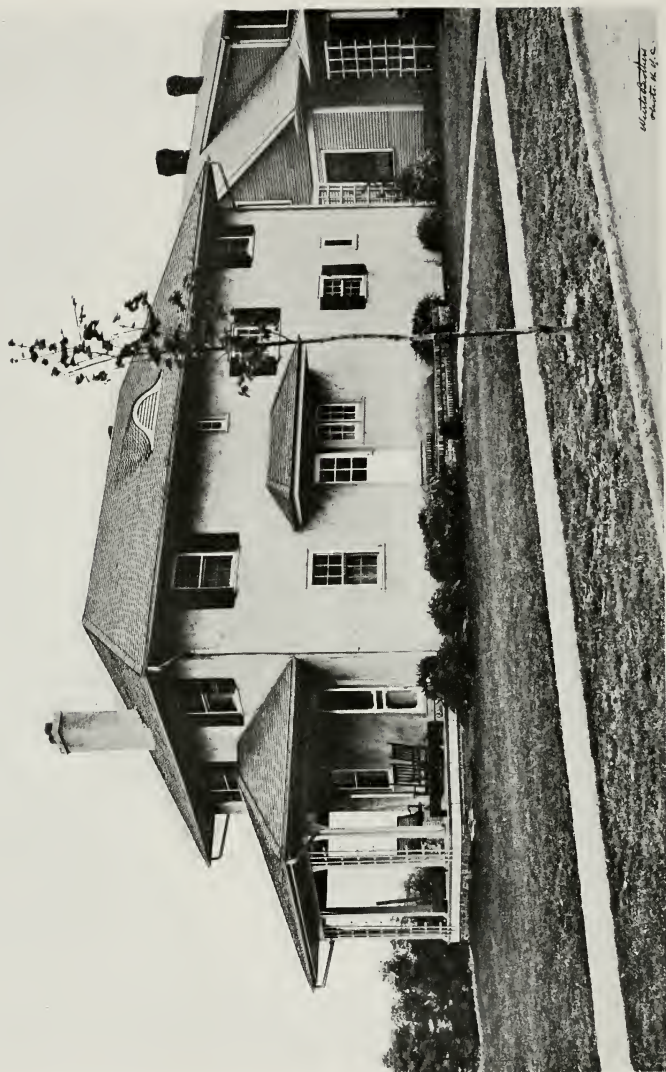


CORNER OF BROAD AND SEVIER STREETS
CLINTON MACKENZIE
Architect



W. MacKenzie
March 1916

TYPE USED IN BROAD STREET DEVELOPMENT
CLINTON MACKENZIE
Architect

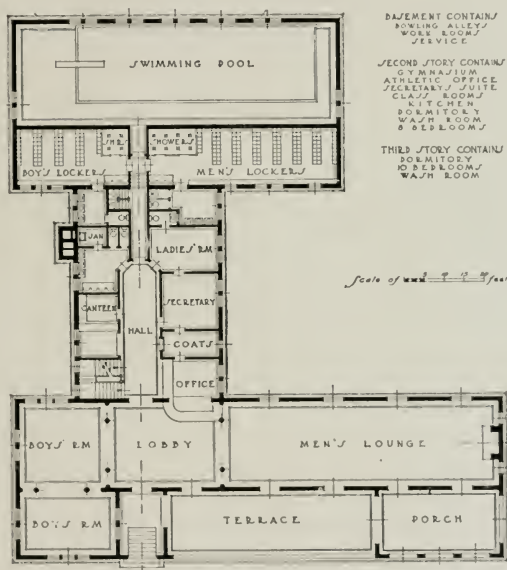


*Watauga Street
Photo H. G. C.*

TYPE USED IN WATAUGA STREET DEVELOPMENT
CLINTON MACKENZIE
Architect



FRONT ELEVATION



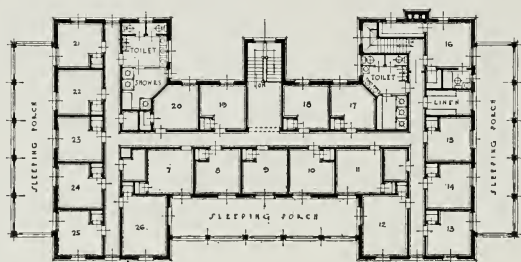
FIRST FLOOR PLAN

Y. M. C. A. BUILDING ·
KINGSPORT TENN.

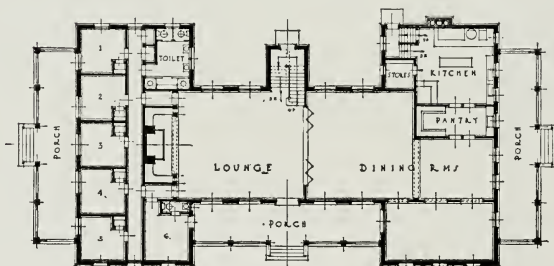
CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. N.Y.C.



FRONT ELEVATION



SECOND FLOOR PLAN



FIRST FLOOR PLAN

Scale of horizontal feet.

CLUB HOUSE
FOR THE
FEDERAL CHEMICAL CO.
KINGSPORT TENN

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST NYC

AMATOL, NEW JERSEY

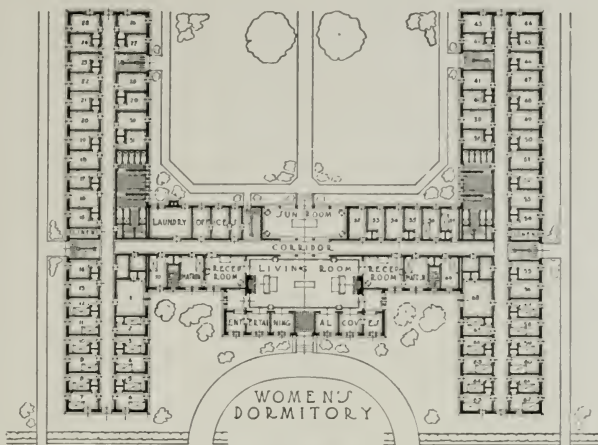
Built for the U. S. Ordnance Department by the Atlantic Loading Co., to house 25,000 people, it illustrates one of the larger war cities. Erected for temporary use, it still involved all the problems of public utilities, educational and social life of a permanent city, in addition to the special requirements of a war town. Some of the special buildings are shown rather than the housing which presented no unusual features except in detail construction.



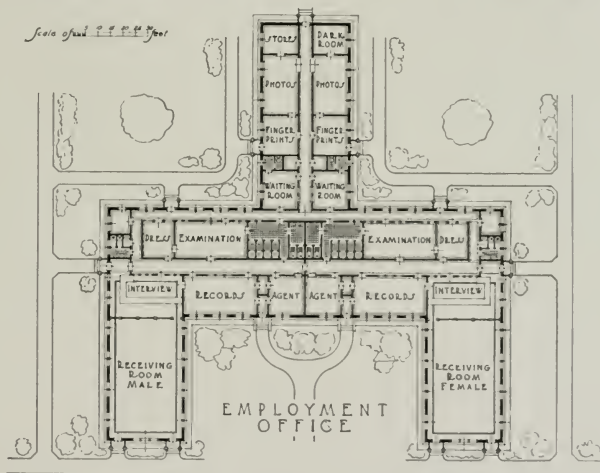
PLAN FOR
AMATOL
 NEW JERSEY
 OLIVERA DIST. U.S.A.

CLINTON MACKENZIE
 ARCHITECT
 15 MADISON ST. N.Y.C.

Scale 1/4" = 100'

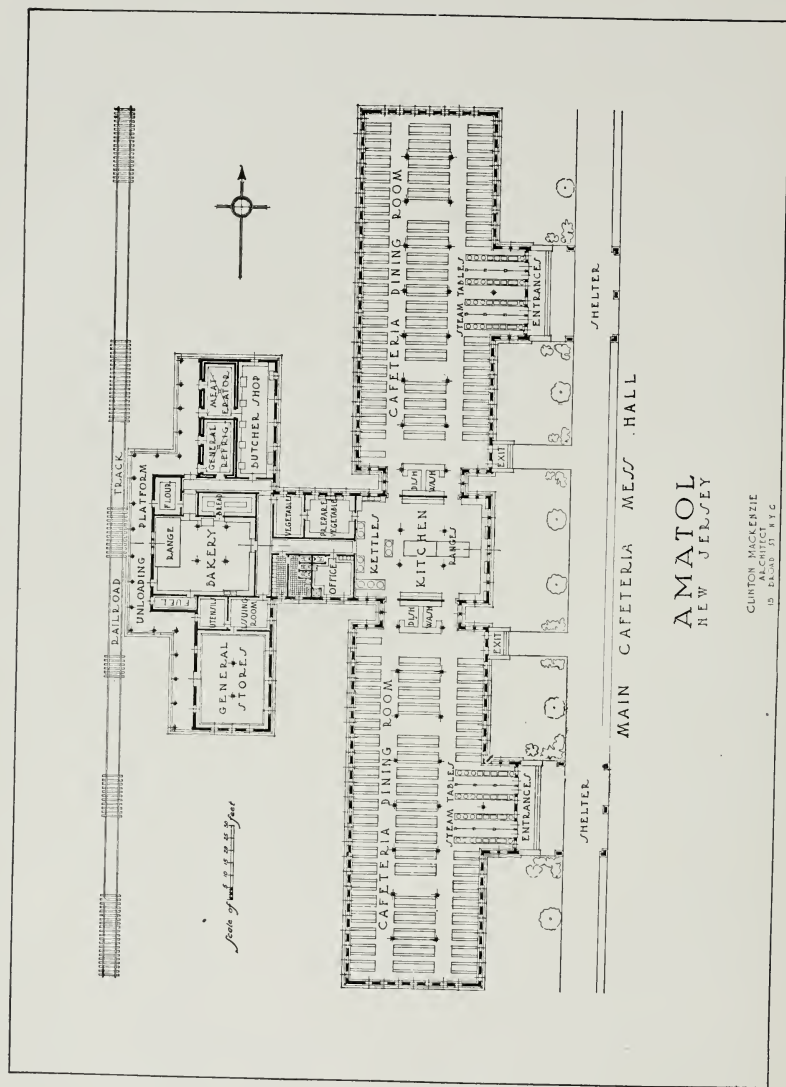


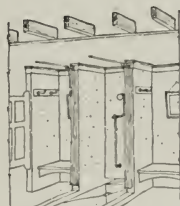
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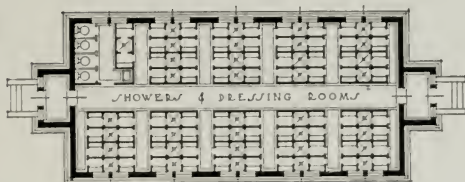
AMATOL NEW JERSEY

CLINTON MACKENZIE
ARCHITECT
15 MADISON ST., NYC



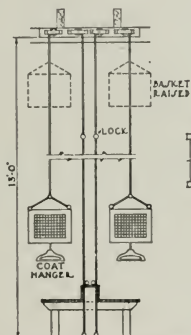


DETAILS - SHOWER & DRESSING ROOMS

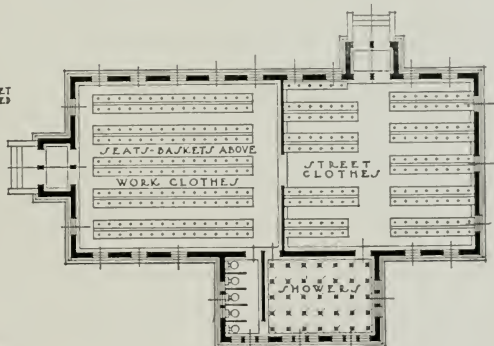


WOMEN'S CHANGE HOUSE

Scale of 1" = 10' 0"



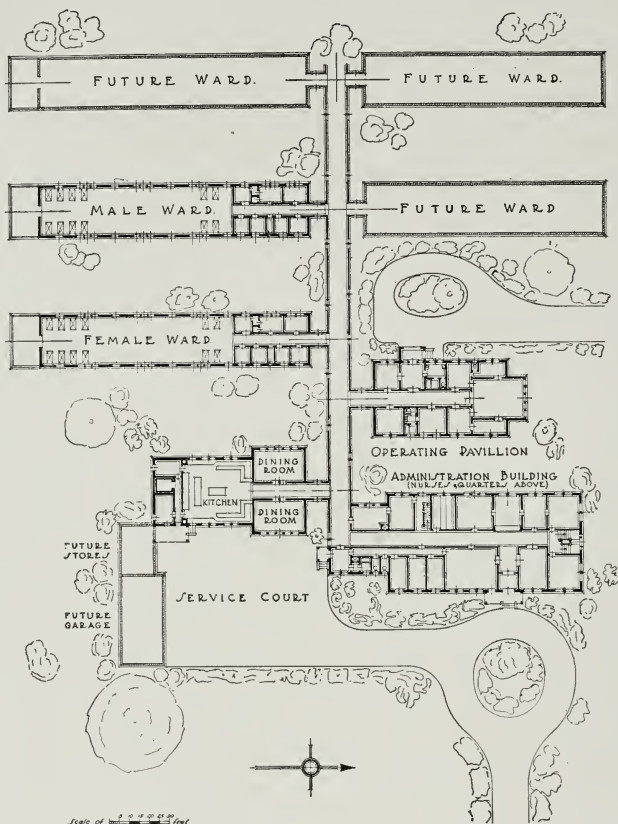
DETAILS - CLOTHES CONTAINERS



MEN'S CHANGE HOUSE

INDUSTRIAL BUILDINGS
AT
AMATOL
NEW JERSEY

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST., N.Y. CITY



HOSPITAL GROUP
AT
AMATOL
NEW JERSEY

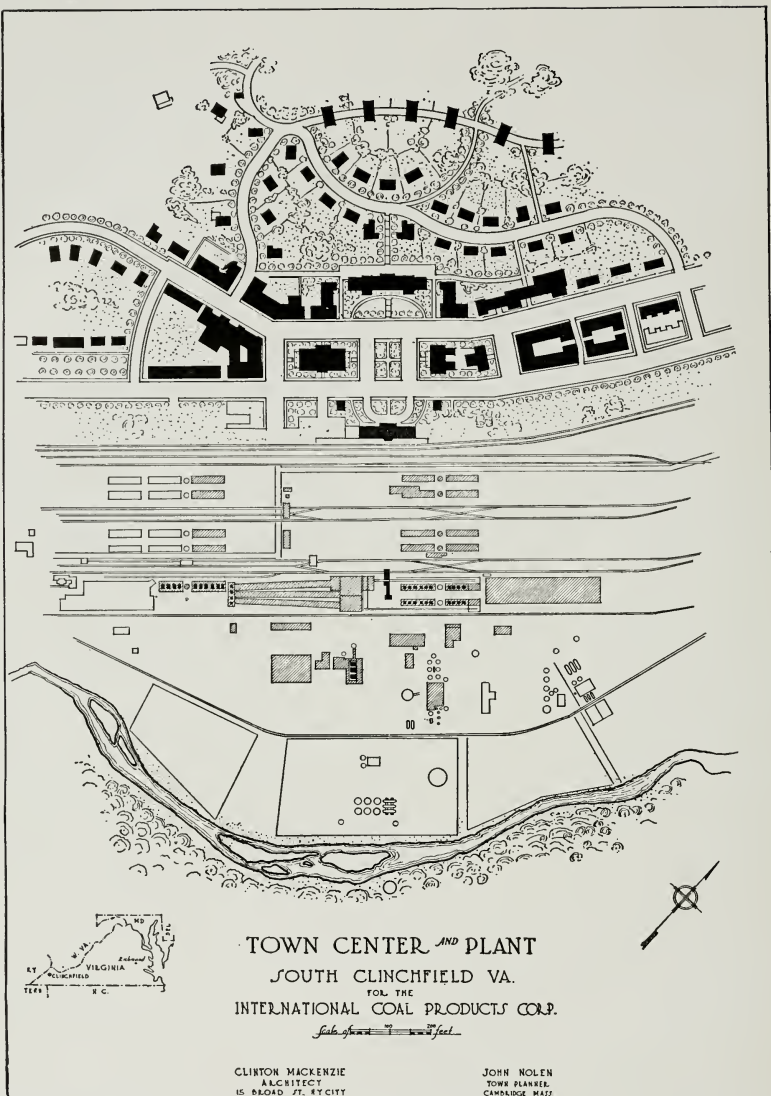
CLINTON MACKENZIE
ARCHITECT
15 BRAD ST NYC

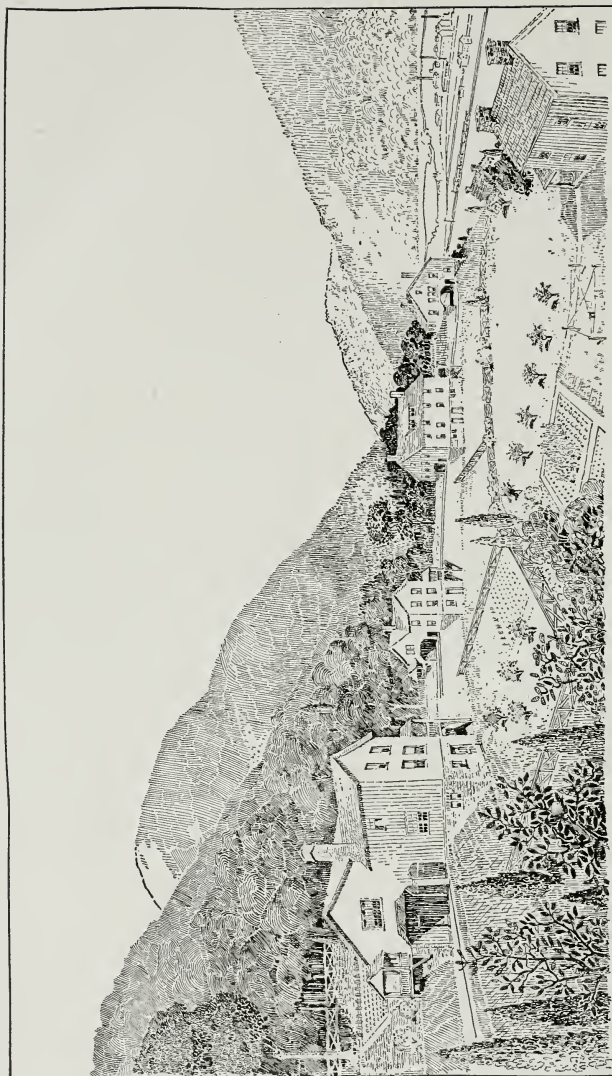
SOUTH CLINCHFIELD, VA.

Represents a one industry town, being erected for the International Coal Products Corporation.

The town was planned for its ultimate development before the construction of the plant was begun, so that it was possible to so locate temporary construction buildings that they could be later converted into permanent assets rather than a waste.

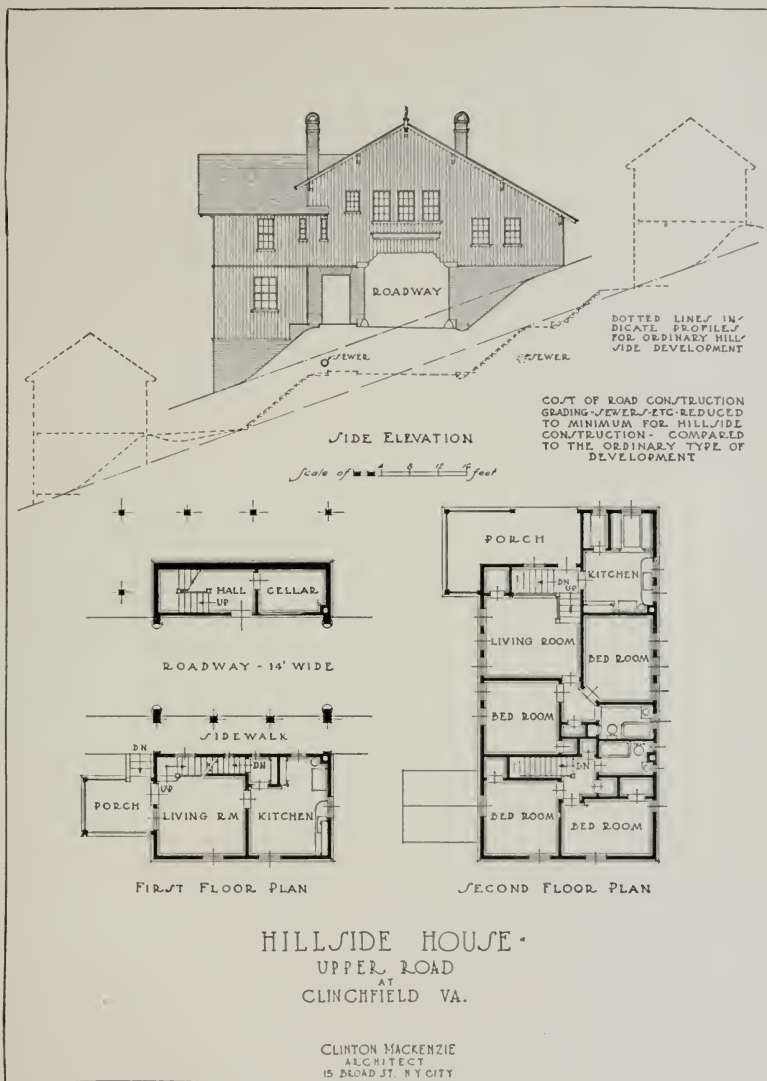
Located in a beautiful mountain valley, the plant site occupies the low ground and the houses are arranged along the foot of the mountains. The steep grades necessitate the development of the novel type of industrial house shown. The saving in grading, sidewalks, sewers, and water lines is worth considering, while greater privacy is insured each tenant than in the usual form of double house. The main portion of the housing will lie on either side of the town center shown.





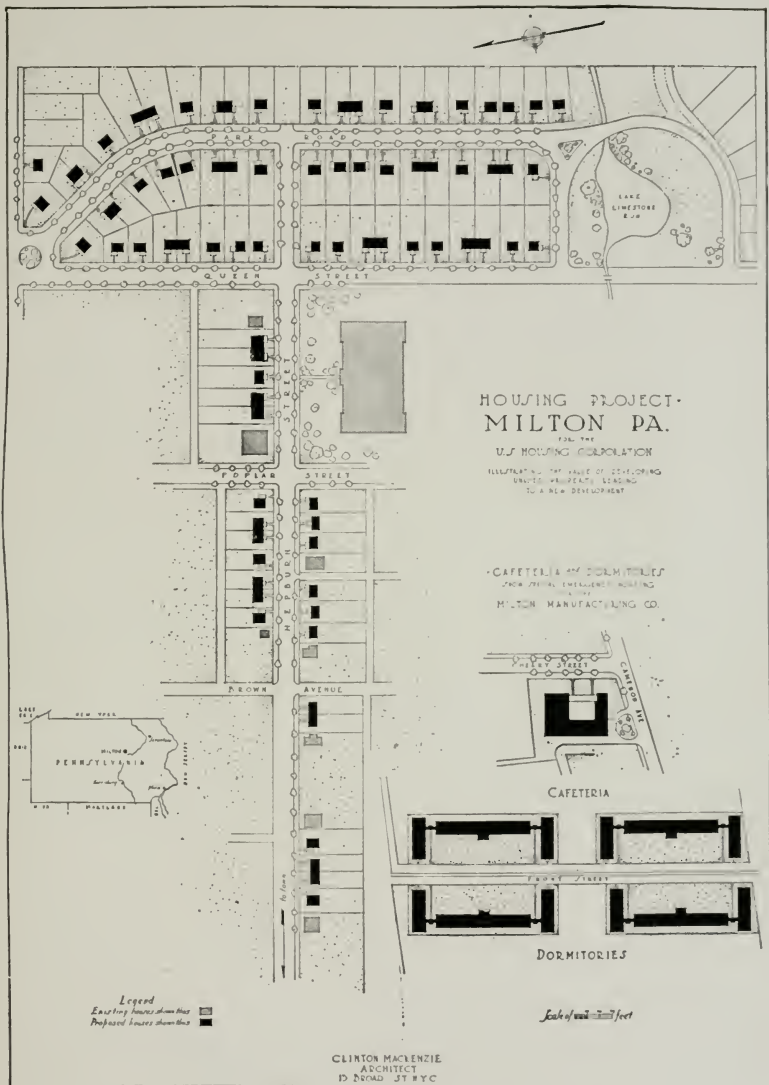
• UPPER ROAD AT CLINCHFIELD •
 • HOUSES FOR THE
 • INTERNATIONAL COAL PRODUCTS CORP. •

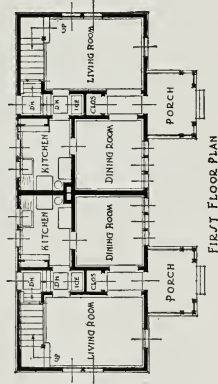
CLINTON MACKENZIE
 ARCHITECT
 15 BROAD ST. N.Y.C.



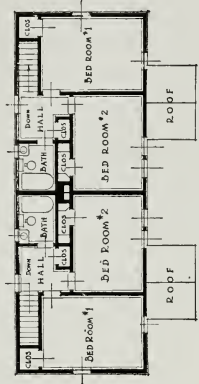
MILTON, PA.

Illustrates housing designed for the U. S. Housing Corporation to be located in an existing town and to be permanent in character. The principal point of interest in the general plan lies in the use of undeveloped property on an existing street leading to the new development, so that when completed the town would have actually grown out to the new subdivision, thus making the maximum use of existing utilities, a point which is often overlooked in the speculative method of land development.

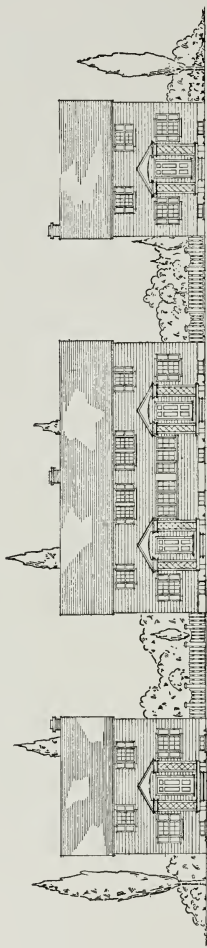




FIRST FLOOR PLAN



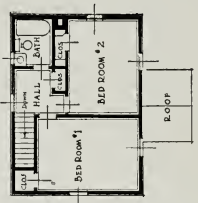
SECOND FLOOR PLAN



ELEVATIONS



FIRST FLOOR PLAN

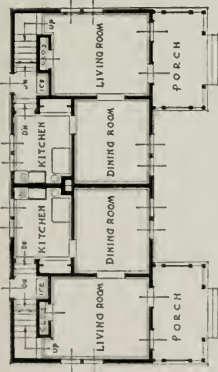


SECOND FLOOR PLAN

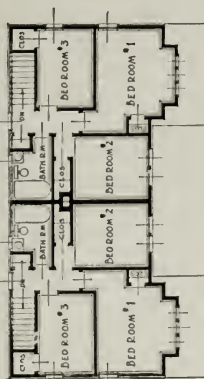
HOUSING PROJECT
MILTON PA.
FOR THE
U.S. HOUSING CORPORATION

Plans 1" = 8'-0" Elevations 1" = 8'-0"

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST., NYCITY



FIRST FLOOR PLAN



SECOND FLOOR PLAN



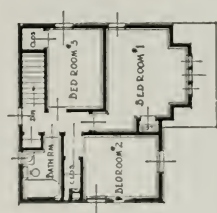
ELEVATIONS

HOUSING PROJECT.
MILTON PA.
FOR THE
U. S. HOUSING CORPORATION

Plans Scale of 1" = 3'-0" feet
Elevations Scale of 1" = 10'-0" feet



FIRST FLOOR PLAN



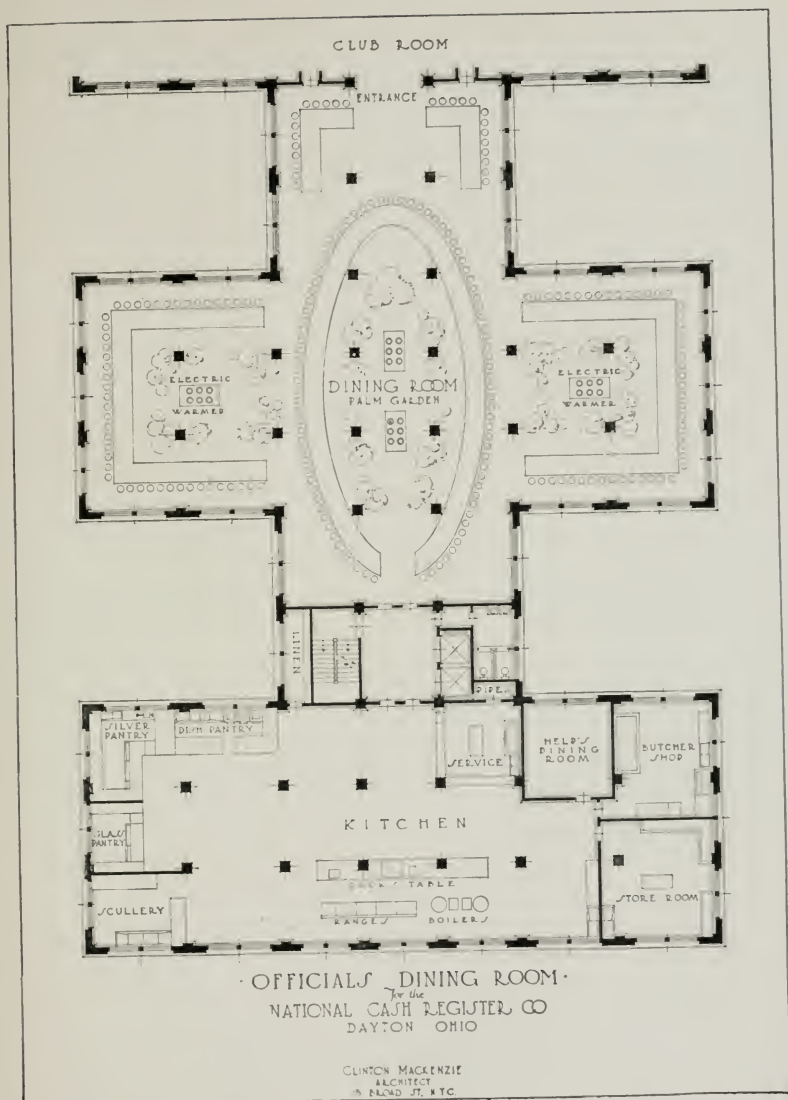
SECOND FLOOR PLAN

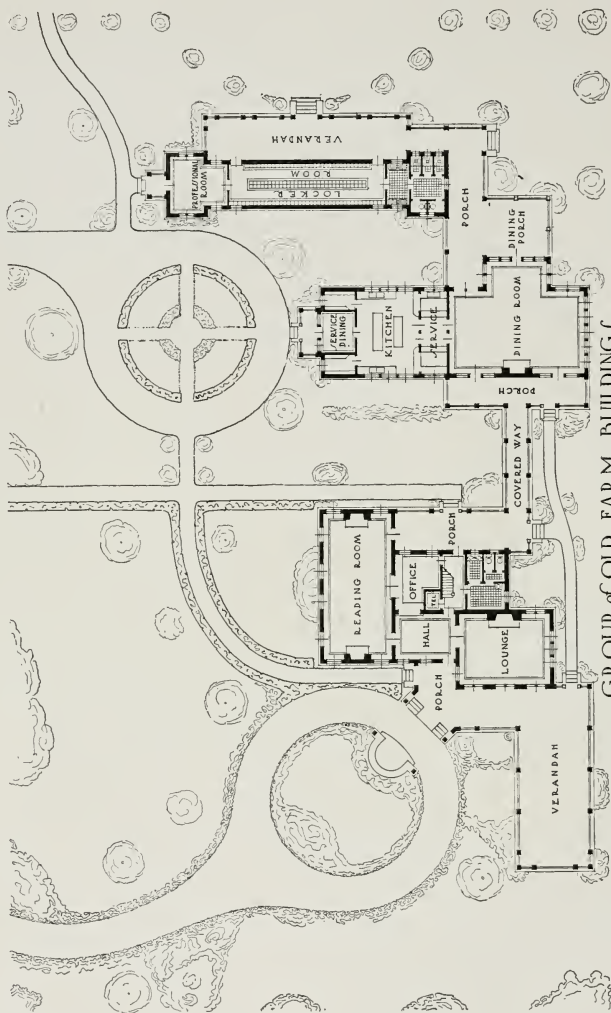
CLINTON MACKENZIE
ARCHITECT
158 SOUTH 37th CITY

THE NATIONAL CASH REGISTER CO.

As representing another phase of the industrial problem the following illustrations show some of the work done for the benefit of the officers and salaried employees.

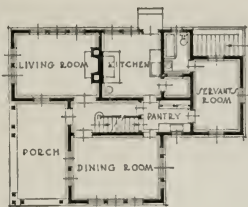
It comprised the development of a large tract of rolling farm and wood lands near the plant into a park, several of the old farm groups being developed for clubs, and other special purposes, and the housing scattered throughout wherever a good site was found, and not subdivided into lots. Narrow roads and bridle paths gave it unusual interest in preserving the park effect and extending the road mileage for equestrians.



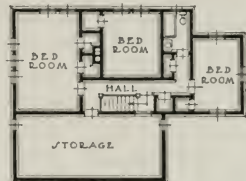


GROUP OF OLD FARM BUILDINGS
 CONVERTED INTO A COUNTRY CLUB
 for the
 NATIONAL CASH REGISTER CO.
 DAYTON, OHIO

CLINTON MACKENZIE
 ARCHITECT
 15 MADISON ST. N.Y.C.



FIRST FLOOR PLAN



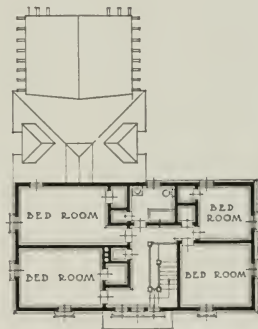
SECOND FLOOR PLAN

DUNGALOW No.10

Scale of $\frac{1}{4}$ inch = 1 foot



FIRST FLOOR PLAN

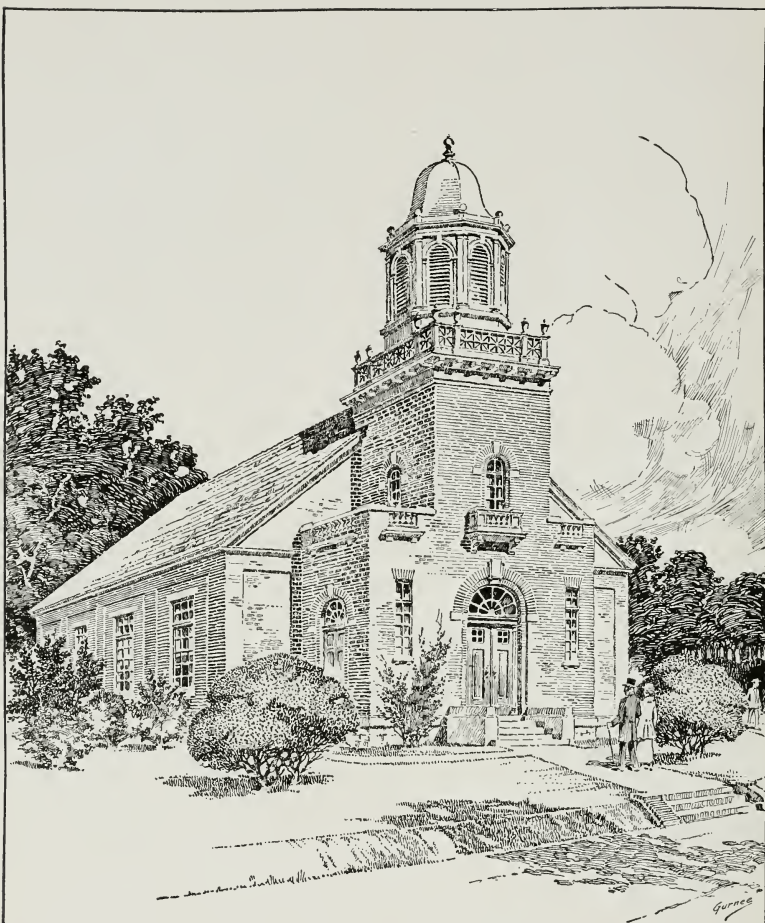


SECOND FLOOR PLAN

DUNGALOW No.26

HOUSING DEVELOPMENT -
for the
NATIONAL CASH REGISTER CO.
HILLS & DALES
DAYTON, OHIO

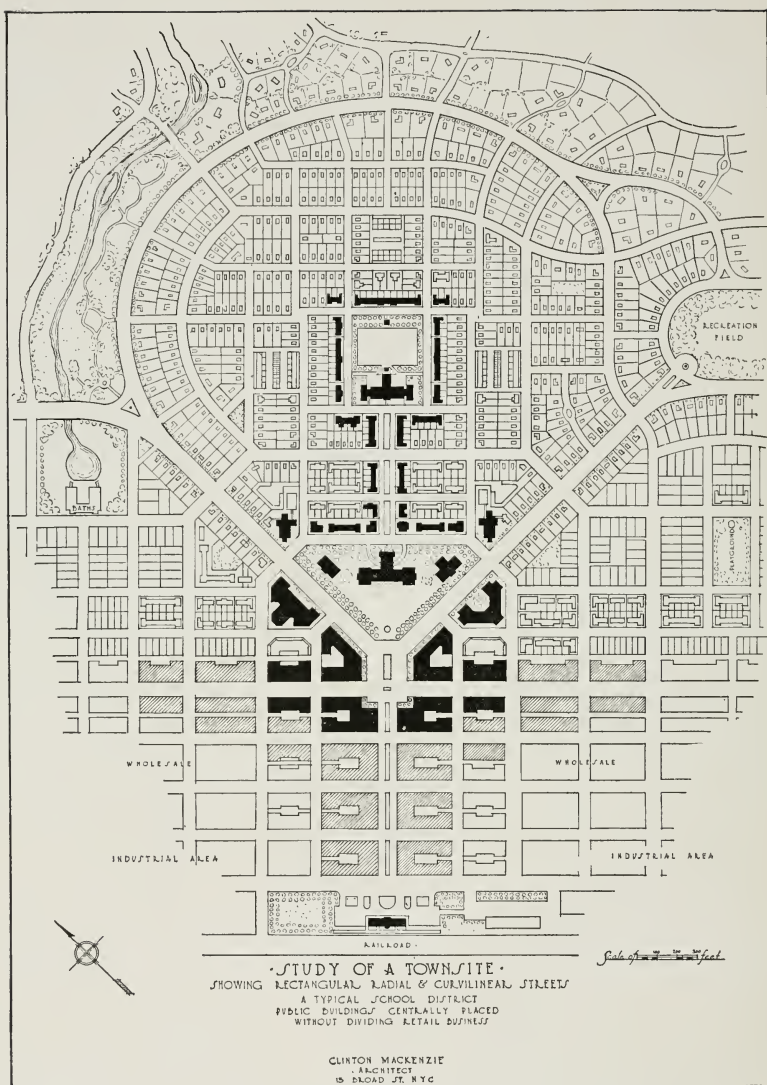
CLINTON MACKENZIE
ARCHITECT
15 BROAD ST., N.Y. CITY

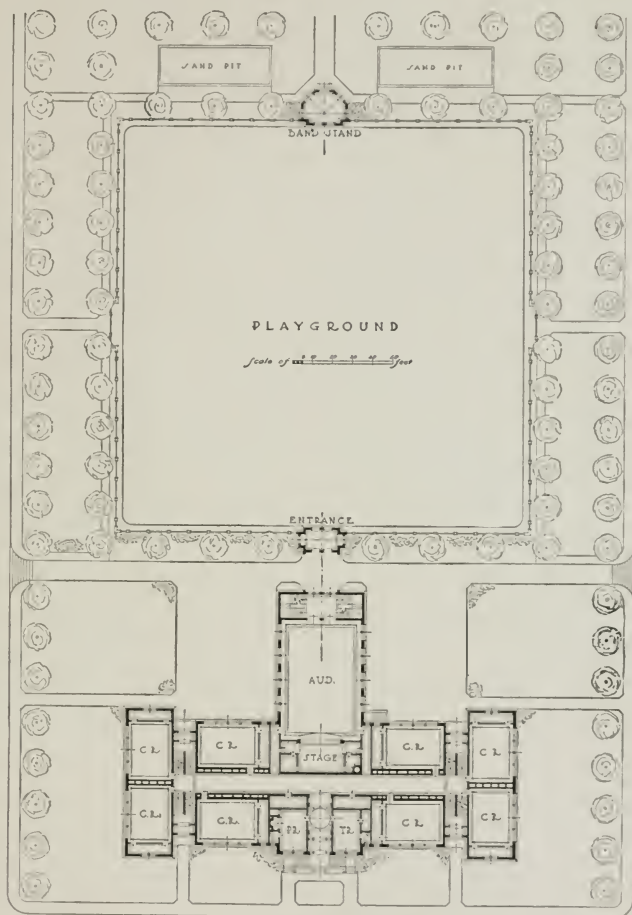


• DAVID'S CHURCH •
for the
 NATIONAL CASH REGISTER CO.
 DAYTON OHIO

CLINTON MACKENZIE
 ARCHITECT
 15 BROAD ST. N.Y. CITY

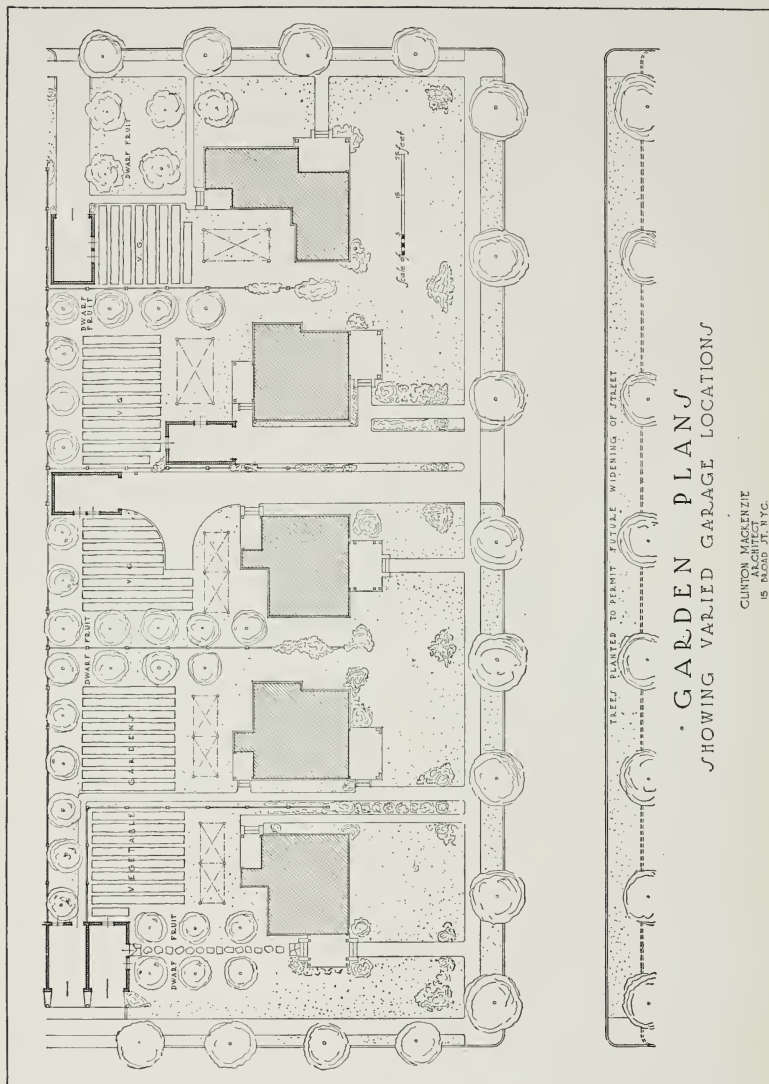
MISCELLANEOUS PROBLEMS





· SCHOOL SITE ·
PLAYGROUND PARK & AUDITORIUM
DEVELOPED AS COMMUNITY CENTER

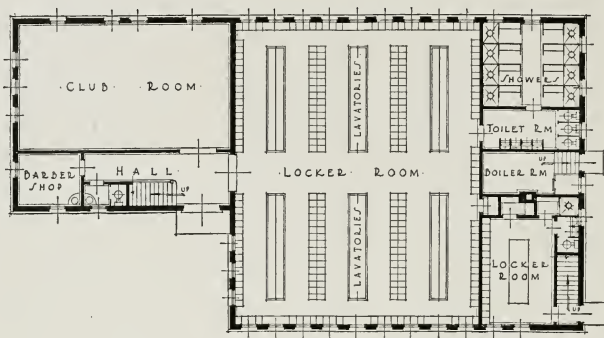
CLINTON MACKENZIE
ARCHITECT
15 ELMWOOD ST. NYC



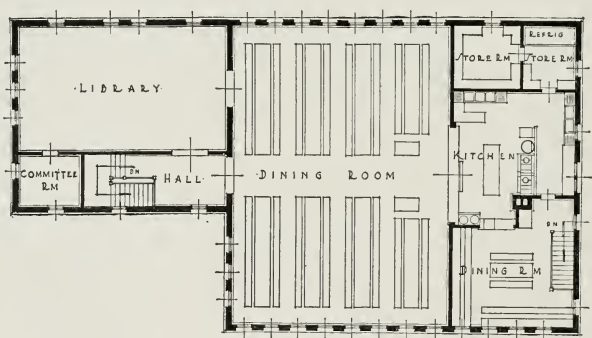


HOUSING FOR
The PENNSYLVANIA GLASS SAND Co

CLINTON MACKENZIE
MANUFACTURING
IS BROAD STREET



• FIRST FLOOR PLAN •



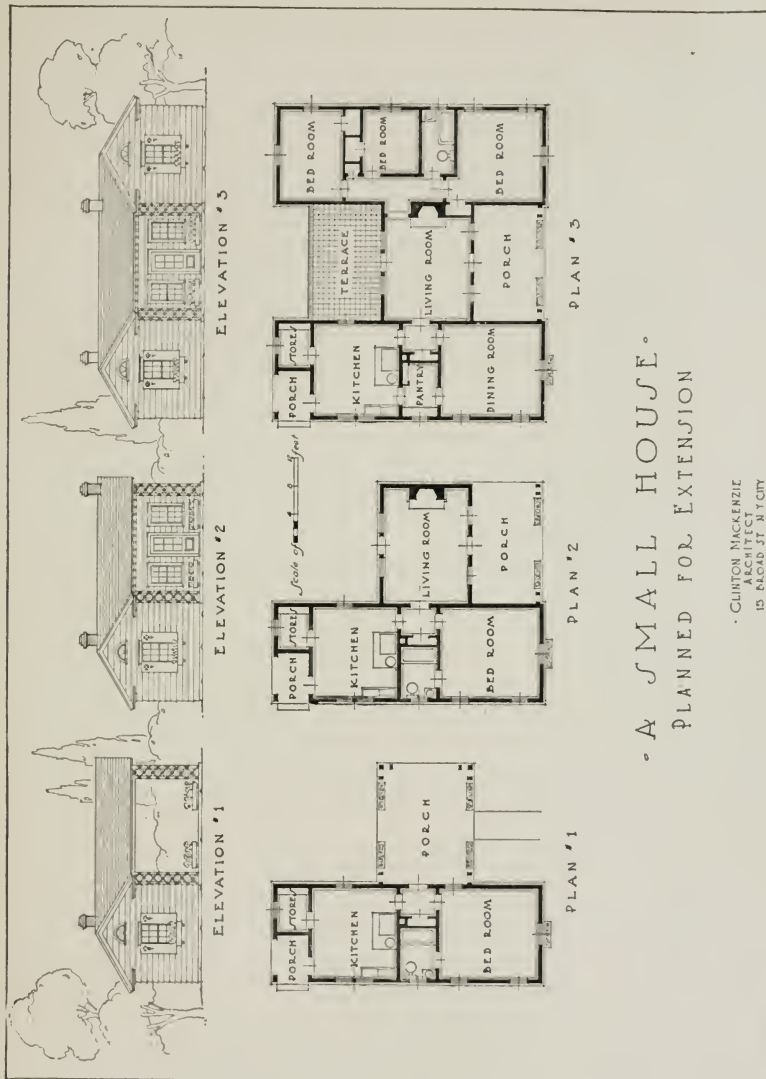
• SECOND FLOOR PLAN •

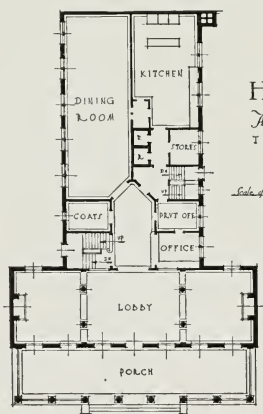
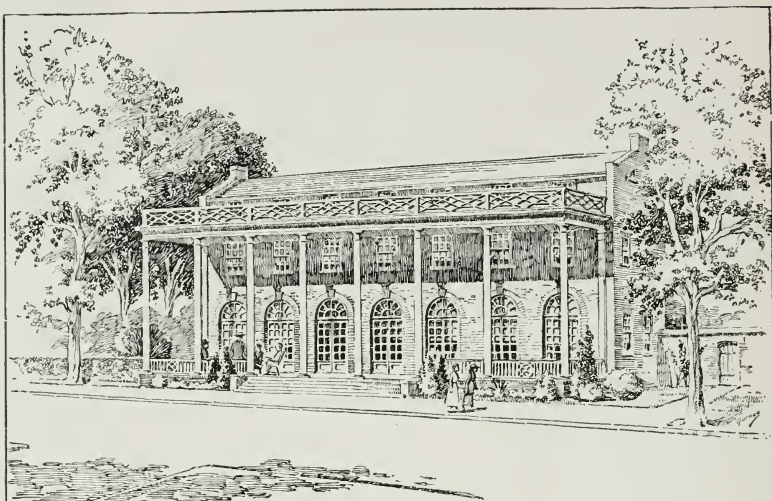
Scale of $\frac{1}{4}$ inch = 1 foot.

• CAFETERIA AND CLUB HOUSE •

FOR THE
GENERAL CHEMICAL CO.
PULASKI, VA.

CLINTON MACKENZIE
ARCHITECT
15 BROAD ST. N.Y. CITY

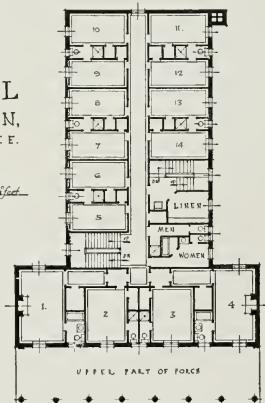




• FIRST FLOOR PLAN •

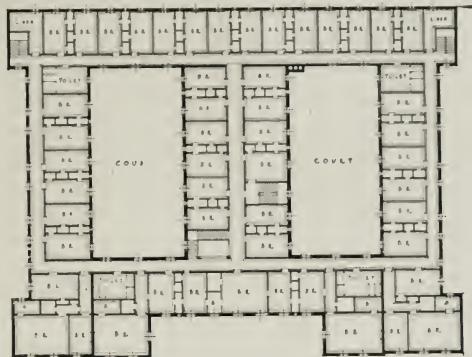
HOTEL McERWIN, TENNESSEE.

Scale of work 1" = 5'-0" feet



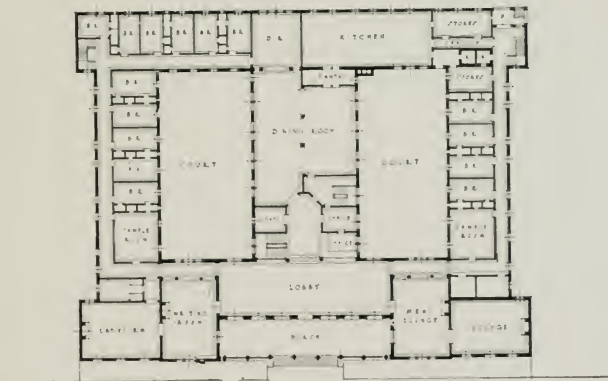
• SECOND FLOOR PLAN •

• CLINTON MACKENZIE •
• ARCHITECT •
• 15 BROAD ST., NYC. •



SECOND FLOOR PLAN

See scale 1" = 10' 0"



FIRST FLOOR PLAN

HOTEL
DR. ERWIN, TENN.

CLINTON WALKERZIE
ARCHITECT
15 EUGENE ST. NYC



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